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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,842	10/11/2001	Tetsuji Togawa	2001-1521A	7718

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WASHINGTON, DC 20006-1021

EXAMINER
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ROSE, ROBERT A

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 12/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/973,842

Applicant(s)  
Togawa et al

Examiner  
Robert Rose

Art Unit  
3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Oct 6, 2003
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above, claim(s) 13-27, 58, and 60-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-7, 12, 28, 30-36, 41-43, 46, 47, 49-51, 56, 57, and 59 is/are rejected.
- 7) ☒ Claim(s) 2, 8-11, 29, 37-40, 44, 45, 48, and 52-55 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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### DETAILED ACTION

1. Receipt is acknowledged of Applicant's Election of Group I, claims 1-60, and the species of Group A(Figures 1-6). Election was made without traverse in paper no. 5.
2. Claims 61-62 are withdrawn from consideration as being directed to a non-elected invention. Election was made without traverse in paper no. 5. In addition, claims 13-27, 58, and 60 are withdrawn from consideration, as being directed to a non-elected species of the invention. Note that these claims are not directed to the elected embodiment of Group I, which requires a membrane in contact with the backside of the wafer, and a bag arrangement in contact with the membrane.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-7, 28, 30-36, 57 and 59 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Chen et al(US 6080050). Chen et al('050) discloses a substrate holding apparatus comprising all of the subject matter set forth in Applicant's claims above. Chen et al('050) discloses a wafer carrier having an inflatable bag behind a wafer-backed membrane, for providing pressure across the back of the wafer. Note top ring body(120), elastic pad(118), support member(104), contact member(166)(168), first pressure chamber(162), second pressure chamber(188), and fluid source(192).

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al('050). With regard to claims 12, and 41 the use of an insulating material for the support member to prevent thermal deformation of the support and non-uniform polishing would have been obvious to those of ordinary skill in the art, since it is known in the art that components at different temperatures create unwanted deformation in the wafer being polished.

7. Claims 42-43, and 46-47, 49-51 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shamouilian et al. Shamouilian et al discloses a wafer carrier having multiple enclosed bags located behind a membrane to independently apply differential pressure behind the wafer(Figure 4). To mount the elastic bag membranes to the lower surface of the support member in Shamouilian et al to prevent shifting of the bag during periods of inflation and deflation, would have been an obvious mechanical expedient to those of ordinary skill in the art.

8. Claims 2, 8-11, 29, 37-40, 44-45, 48, and 52-55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chen et al ('089) is cited of interest to show a wafer carrier having an air bag enclosing tubular rings for applying differential pressure across the backside of the wafer.

10. Any inquiry concerning this communication should be directed to Robert Rose at telephone number (703) 308-1360.

IT

December 8, 2003.

A handwritten signature in cursive script, appearing to read "Robert Rose".

ROBERT A. ROSE  
PRIMARY EXAMINER  
ART UNIT 323